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Emotional Support, Academic Resiliency, and School Engagement in an Online Learning Setting during Covid-19 Pandemic

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Abstract: In recent years, numerous published scholarly works have examined the association between academic resilience and school engagement, as well as the function of emotional support in bolstering the relationship between the two. However, these investigations have only been undertaken at the elementary and secondary levels. Therefore, it can be concluded that there are only a few studies that were conducted in the context of Higher Education, especially in the Philippines. In this regard, this study aimed to evaluate the relationship between academic resilience (ARS) and school engagement (SE) via teacher-emotional support (TES). Using data from 910 students and Partial Least Square-Structural Equation Modeling (PLS-SEM), it was unraveled that (1) ARS positively affects SE, (2) ARS leverages TES, (3) TES affects SE, and (4) TES partially mediated the association between students' ARS and SE. According to the findings, instructors' emotional support promotes college students' resilience and engagement. The study underlined the need of strengthening personal and contextual resources to support student well-being in an online class setting.

Keywords: academic resiliency, college students, instructor emotional support, online learning, school engagement.

Introduction

Academics have studied *resilience* because of its link to academic success and adjustment (Dwiastuti et al., 2022). Resilient students may persevere through challenging educational settings, maintain a high level of desire, and succeed despite many obstacles (Rao & Krishnamurthy, 2018). Numerous studies have shown that academic resiliency and school engagement are strongly and positively associated before, during, and after the pandemic (Versteeg et al., 2022). Academic resiliency motivates students to study more and perform better. Despite the data, it's interesting to explore emotional forms like the *instructor's emotional support* and contextual personal resources. According to the theory of self-determination, a student's perception of instructor emotional support is the degree to which they feel their teacher cares about them as an individual, is understanding of their circumstances, and shows enthusiasm and positivity in response to their efforts (Yang et al., 2021). In elementary and secondary education, this topic has been extensively researched. There is little literature on how higher education students in the Philippines see their instructors' emotional support, which will help them overcome

academic problems, especially during the pandemic. Therefore, a comprehensive enquiry should be conducted. This study investigated academic resilience and school engagement through the mediating effect of instructors' perceived emotional support. This study also sought to demonstrate how online instructors might provide emotional support to students in an online setting. By making students feel comfortable and connected to their teachers, these strategies can boost academic resilience and motivation in learning.

Literature Review

Academic Resilience and School Engagement

Resilience can be defined as the extent to which a person can constructively adapt to adversity, adjust to new circumstances, and ultimately prevail in the face of potentially disastrous occurrences (Wu et al., 2020). Academic resilience, which is vital to a student's educational experience, is the ability to persevere in the face of adversity, whether short-term or long-term. Some academics describe academic resiliency as the ability to overcome academic hurdles and flourish despite a high-risk background (Serrano Sarmiento et al., 2021). According to García-Crespo et al. (2021), academic resilience is the ability to overcome classroom challenges and succeed. Students who overcame major educational obstacles are resilient (Gartland et al., 2019). Resilient pupils participate in all steps and don't give up easily under academic pressure. This characteristic predicts high accomplishment motivation, academic performance, lowered dropout intentions, and students who are very happy with their lives (Bittmann, 2021).

Aspects of students' cognitive abilities, affective, and behavioural all contribute to their level of *engagement* in school (Benito Mundet et al., 2021). There are three components: *vigour, dedication,* and *absorption*. *Vigour* is the capacity to bounce back quickly from setbacks while maintaining one's enthusiasm, concentration, and drive for one's studies (Jindo et al., 2020). *Dedication* is characterised by an intense interest in one's academic pursuits and a willingness to go the extra mile to succeed (Teuber et al., 2021). An *absorbed* learner is one who is totally engrossed in what he or she is learning (Koob et al., 2021). Academic resilience and other characteristics as drivers of student engagement have been the focus of such studies (Mozammel et al., 2018). Finally, the demand-resources model extended to education suggested that better personal resources like academic resiliency might boost aspirations and school engagement (Fiorilli et al., 2020). With this in mind, the current study is aimed at delving deeper into the connection between academic resilience and educational engagement, on the assumption that academic resilience is a personal resource and antecedent to educational engagement.

The Mediating Role of Perceived Teacher's Emotional Support in the Relationship between Academic Resilience and School Engagement

College students spend a great deal of time in classrooms (both physical and virtual), are subjected to constantly evolving academic requirements, and must balance a wide range of expectations and stresses (Romano et al., 2021a). Given the above, it's not unexpected that students are profoundly impacted by their teachers' and other significant adults' ability to provide emotional support as they navigate the emotional strain of excessive academic obligations (Yang et al., 2021). Fostering a safe and supportive classroom environment, being responsive to students' individual concerns, and encouraging positive peer interactions are all aspects of what we mean when we talk about teachers providing emotional support (Pakarinen et al., 2020). *Positive climate* (PC), *teacher sensitivity* (TS), and *regards for the adolescent perspective*

(RAP) are the three pillars of TES, as stated by Yang et al. (2022). The term *positive climate* (PC) is used to describe a classroom in which the teacher actively encourages constructive interactions between students, which can result in more chances for students to show academic improvement. Additionally, the term *teacher sensitivity* (TS) refers to when a teacher keeps a close eye out for signs that their students might benefit from some extra help in class. Last but not least, *regard for adolescent perspective* (RAP) refers to how much teachers value students' points of view on issues including adaptability, relevance, autonomy, leadership, and quality peer relationships. Each of these factors is seen as important in its own right but together they play a key role in fostering students' desire and engagement (Ruzek et al., 2016). Students who report receiving emotional support from teachers have been found to do better academically and adapt better to school settings, according to empirical studies (Frenzel et al., 2021). Consistent with these discoveries, previous research has demonstrated that students who are more capable of overcoming adversity have a more favorable view of their classroom environments and experience greater encouragement from their teachers (Cassidy, 2015; Yilmaz Findik, 2016). Similar research has found that students who are able to bounce back from setbacks are more likely to feel their teachers' support and encouragement, which, in turn, is strongly linked to better long-term adjustment (Rodríguez-Fernández et al., 2018). In addition, current research has linked students' degree of involvement in the classroom to their level of academic resilience and their perception of emotional support from teachers (Ahmed et al., 2018). Thus, it could be possible and hypothesised that highly resilient students who perceived higher levels of emotional support from their instructors could experience higher engagement in school.

Research Questions

1. How may the respondents be described in terms of gender and current institute?
2. Is there a significant relationship between:
    a. ARS and TES;
    b. ARS and ENG; and,
    c. TES and ENG;
3. Does ARS have a significant influence on ENG?
4. Does ARS have a significant influence on TES?
5. Does TES have a significant influence on ENG?
6. Does TES mediate the relationship between ARS and ENG?

Hypotheses

In this light, the purpose of this study is to investigate and assess the following hypotheses:

H_1: academic resilience has a significant relationship and can positively affect school engagement

H_2: academic resilience has a significant relationship and can positively affect perceived instructor's emotional support;

H3: perceived instructor's emotional support is positively related and leverages school engagement

H4: perceived instructor's emotional support mediated the relationship between academic resilience and school engagement.

Figure 1 depicts the conceptual framework for the present investigation.

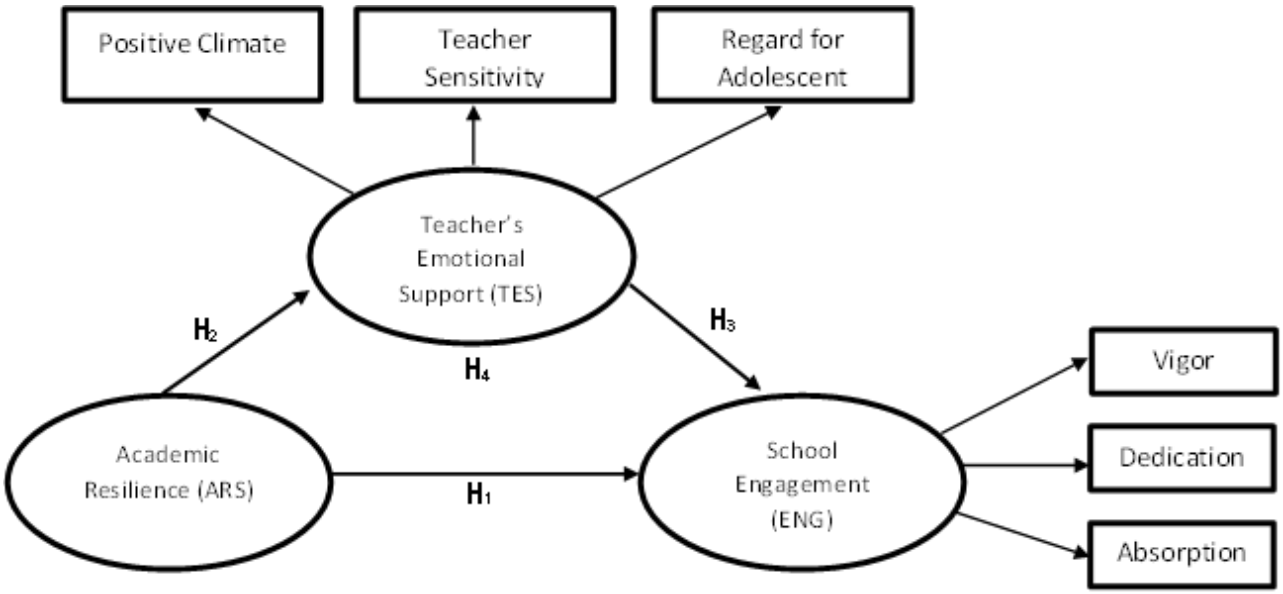

Figure 1: Conceptual framework.

Methods

Participants and Sampling Technique

Respondents were first- to fourth-year City College of Angeles' students in the Philippines during the Covid-19 pandemic in the first semester of 2022-2023. Participants were chosen using *convenience sampling*. This particular sampling selects respondents based on availability (Frey, 2018). Personal networks and proximity are both considered accessible. This investigation's sample size was determined by *Raosoft Sample Size Calculator*. Sample size was 357 for 5,000 potential students. After data cleaning, 910 students completed the online survey.

Instruments

The gathering of data was performed via an online survey using Google Forms. Also, three instruments were adopted for this study. First, the 30-item *Academic Resilience Scale*, or the ARS-30 by Cassidy (2016), was used to measure students' academic resilience based on specific cognitive-affective and behavioural responses to educational diversity. Responses were recorded on a 5-point Likert scale (1 = unlikely to 5 = likely); an example of an item is *I would do my best to stop thinking negative thoughts.* In this particular instrument, a composite score was obtained (i.e., summation of the retained items after extraction). From the original study of Cassidy (2016), the Cronbach's Alpha value was 0.90, and for this investigation, the value was 0.93, indicating high internal consistency.

Second, the *Teacher's Emotional Support Scale* by Romano et al. (2020) was used to measure students' perceptions of their teachers' emotional support. The scale is composed of 15 items on a 5-point Likert scale (1 = Not at all true, 5 = Very true). It measures three distinct and related features of teacher emotional support: Positive Climate (e.g., *Our instructors want students in this class to respect each other's ideas*), Teacher's Sensitivity (e.g., *Our instructors are available to help students when we have questions*), and Regard for Adolescent Perspective (e.g., *Our instructors encourage us to help other students with their works*). Cronbach's Alpha is 0.86 for the total score in the current study and between 0.86 and 0.93 for its subscales.

Lastly, the *Utrecht Work Engagement Scale for Students* (UWES-9S) which was adopted from Carmona-Halty et al. (2019) was used which measures the overall school engagement of students. UWES-9S is a nine-item self-report scale on a 6-point Likert Scale (0 = Never, 6 = Always) which is subdivided into three unique features: Vigour [VI] (e.g., I feel energetic and capable when I'm studying or going to class), Dedication [DN] (e.g., I am enthusiastic about my studies), and Absorption [ABS] (e.g., I get carried away when I am studying). The Cronbach's Alpha is 0.91 for the entire score in the current study and between 0.77 and 0.86 for its subscales.

Data Analysis

Factor Analysis

A factor analysis was performed using *Partial Least Squares-Structural Equation Modelling* (PLS-SEM) using SmartPLS 4. PLS-SEM as a statistical treatment for obtained data is highly suitable for this investigation. For the measurement model, scholars are advised to consider the outer loadings of the items and the average variance extracted (AVE) to establish convergent validity (Hair et al., 2021). Additionally, scrutinisation of the Fornell-Larcker and Heterotrait-Monotrait criterion were also performed as per the suggestion of Hair et al., in assessing and establishing discriminant validity. Also, for the structural model, the path coefficients and the coefficient of determination (R^2) were measured. Finally, IBM SPSS Version 27 was used for descriptive and correlational statistical analyses such as *Pearson R* (*r*) *frequency* (*f*) and *percentage* (%) in order to determine the relationship between variables being measured and respondents' demographic characteristics (e.g., Gender and Institute).

Concerning the model specification, ARS was the predictor, while TES was the mediating variable, and ENG was the outcome. For ARS, a composite score was used to obtain global score. TES and ENG were used as latent variables, with their respective three subscales' composite scores as indicators. The conceptual model is shown in Figure 1. Specifically, as depicted in Figure 1, (H_1) represents the effect of ARS on ENG, (H_2) represents the effect of ARS on TES, (H_3) represents the effect of TES to ENG, and, lastly, (H_4) represents the indirect effect TES in between ARS and ENG. To test the hypothesised mediation model, a PLS-SEM with 10,000 resamples of bootstrapped estimates with 95% confidence interval (CI) was performed following Hair et al. (2021).

Ethical Considerations

The respondents were informed about the study's objectives, the instruments, and the constructs that would be measured. Additionally, the researcher provided the benefits of the study for the college and the scientific community. The respondents were required to provide their consent by clicking the agreement attached in Google Forms. They were also given the

freedom to decide whether to participate or decline. Participants were also informed that there might be minor risks in their participating in the study, such as the feeling of being uncomfortable in answering personal and sensitive survey questions. Likewise, they were told that no monetary compensation would be provided for giving information. Given these circumstances, participants were free to withdraw or to ask for a debriefing of the study anytime.

Findings

Descriptive Statistics

Table 1: Demographic Characteristics.

Item	Values	*f*	Percentage
Gender	Male	536	58.9
	Female	374	41.1
Institute	Institute of Education, Arts, and Sciences	393	43.2
	Institute of Business and Management	361	39.7
	Institute of Computing Studies and Library Information Science	156	17.1
	Total	910	100

Table 1 illustrates the demographic characteristics of the respondents who answered the online survey. The results revealed that most of the respondents were males (N = 536) who constitute 58.9% of the collected data compared to females (N = 374) with 41.1%. Lastly, most of the respondents came from the Institute of Education, Arts and Sciences (N = 393) which represents 43.2% of the collected data, followed by the Institute of Business and Management (N = 361) with 39.7% and the Institute of Computing Studies and Library Information Science (N = 156) with 17.1%.

Factor Analysis

Table 2: Measurement Model Results.

Construct	Items	Item Loading	CA	CR	AVE
Academic Resilience	ARS11	0.742	0.927	0.929	0.605
	ARS13	0.727			
	ARS16	0.772			
	ARS18	0.770			
	ARS20	0.733			
	ARS22	0.821			
	ARS24	0.732			
	ARS25	0.834			
	ARS27	0.817			
	ARS30	0.819			
Positive Climate	PC1	0.869	0.858	0.868	0.703

(Teacher Emotional Support)	PC2	0.756			
	PC3	0.896			
	PC5	0.828			
Regard for Adolescent perspective (Teacher Emotional Support)	RAP1	0.829	0.861	0.865	0.705
	RAP2	0.830			
	RAP3	0.854			
	RAP4	0.846			
Teacher Sensitivity (Teacher Emotional Support)	TS1	0.865	0.911	0.913	0.738
	TS2	0.864			
	TS3	0.900			
	TS5	0.858			
	TS6	0.807			
Vigor (School Engagement)	VR1	0.717	0.764	0.798	0.682
	VR2	0.901			
	VR5	0.848			
Dedication (School Engagement)	DN3	0.854	0.857	0.864	0.778
	DN4	0.914			
	DN7	0.876			
Absorption (School Engagement)	ABS6	0.858	0.800	0.811	0.714
	ABS8	0.878			
	ABS9	0.796			

Item loadings > 0.70, Cronbach's Alpha Value (CA) and Composite Reliability (CR) > 0.70, Average Variance Extracted (AVE) > 0.50

In order to measure the reliability of each item, a factor loading analysis was conducted. A threshold value of equal to or greater than 0.7 for each item's loading is considered reliable. The Cronbach's Alpha (CA) and composite reliability (CR) should also be equal to or greater than 0.7. Additionally, the average variance extracted (AVE) was also used to validate constructs. It is the grand mean value of the squared loadings of the items related to the construct and the standard measure for establishing convergent validity. The AVE should be at least 0.5 or greater, and the corresponding *p*-value must be, at most, 0.5. After performing the factor loading analysis and extraction of items lower than the 0.7, and analysing the CR and AVE, Table 2 illustrates the result for Academic Resilience (CA 0.927; CR 0.929; AVE 0.605), Positive Climate (Teacher Emotional Support) [CA 0.858, CR 0.868, AVE 0.703], Regard for Adolescent perspective (Teacher Emotional Support) [CA 0.861; CR 0.865; AVE 0.705], Teacher Sensitivity (Teacher Emotional Support) [CA 0.911; CR 0.913; AVE 0.738], Vigour (School Engagement) [CA 0.764; CR 0.798; AVE 0.682], Dedication (School Engagement) [CA 0.857; CR 0.864; AVE 0.778], and Absorption (School Engagement) [CA 0.800; CR 0.811; AVE 0.714). Hence, the convergent validity has been established.

To establish the discriminant validity, the Fornell-Larcker and Heterotrait-Monotrait criterion were inspected. For Fornell-Larcker, the square root of AVE (diagonal value) in each variable should exceed the correlation of latent variables. Lastly, the HTMT value should be < 0.9. In this, the results are illustrated in Table 3 and 4, respectively. Therefore, discriminant validity has been established.

Table 3: Fornell-Larcker Criterion.

	ABS	ARS	DN	PC	RAP	TS	VR
ABS	0.845						
ARS	0.497	0.778					
DN	0.788	0.593	0.882				
PC	0.368	0.637	0.446	0.766			
RAP	0.450	0.563	0.464	0.651	0.840		
TS	0.454	0.563	0.489	0.702	0.765	0.859	
VR	0.771	0.517	0.798	0.395	0.460	0.506	0.826

Table 4: Heterotrait-Monotrait Ratio.

	ARS	ABS	DN	PC	RAP	TS	VR
ARS							
ABS	0.512						
DN	0.612	0.782					
PC	0.650	0.363	0.442				
RAP	0.576	0.445	0.454	0.633			
TS	0.584	0.451	0.487	0.703	0.757		
VR	0.529	0.763	0.785	0.393	0.455	0.498	

Heterotrait-Monotrait ratio (HTMT) < 0.90

Correlation Analysis

Before moving forward in performing path and mediation analysis, a correlation of the variables being studied was performed first. Based on the correlation results, findings revealed that ARS is related to ENG (r = .576, p < 0.001) and TES (r = .642, p < 0.001). In this, it can be construed that the higher the resilience level of students, their perceived teacher's emotional support and engagement is also increasing. Lastly, it was found that TES is significantly related to ENG (r = .541, p < 0.001). Hence, it can be concluded that the higher the perceived teacher's emotional support of students, also reports higher school engagement.

Structural Model Assessment, Path and Mediation Analysis

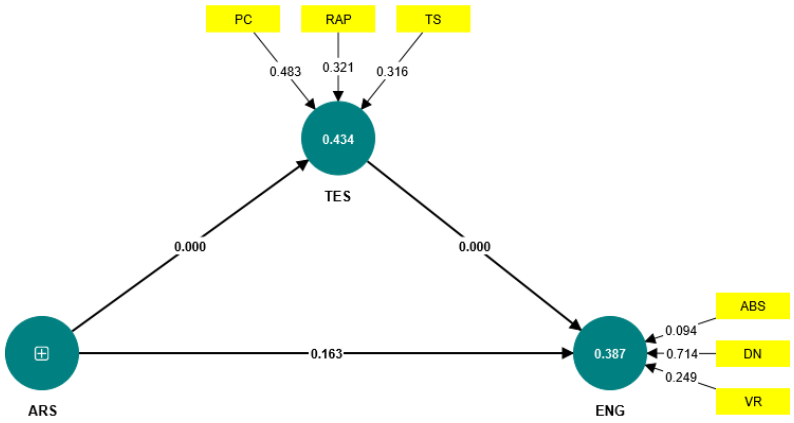

Figure 2: Path Analysis Results.

The explanatory power of the model has been evaluated by measuring the discrepancy amount in the variables of the model. As Hair et al. (2021) have stated, the R^2 and the path coefficients are the essential measures for assessing the structural model. As seen in Figure 2, the model has R^2 value of TES is 43.4%, and ENG 38.7%, respectively.

Table 5: Hypotheses Testing.

Hypothesis	Path	Path Coefficient	*p*-Value	Decision
Direct effect				
H1	ARS → ENG	0.429	0.000	Supported
H2	ARS → TES	0.659	0.000	Supported
H3	TES → ENG	0.251	0.000	Supported
Indirect effect				
H4	ARS → TES → ENG	0.165	0.000	Supported

Table 5 and Figure 2 revealed the path coefficients and p-value for each hypothesis. Based on the findings of this investigation, it can be noted that all hypothesis were supported. The direct paths show that academic resilience is significantly and positively related to school engagement (β = 0.764, p < .05) and teacher emotional support (β = 0.652, p < .05). The findings posited that

the higher the resilience level of students, the more they engaged in school. The same is true with the influence of academic resilience on teacher's emotional support. Meaning, the higher the resilience level of students, they can perceive a higher emotional support from their instructors. Therefore, **H_1** and **H_2** were **supported**. Furthermore, teacher's emotional support is highly related to students' engagement ($\beta = 0.281$, $p < .05$). Thus, it can be postulated that the higher the teacher's emotional support perceived by the students, the more it increases their school engagement. In this, **H_3** is **supported**. Finally, the findings revealed, after the mediation analysis, that teacher's emotional support mediates the relationship between students' academic resilience and school engagement ($\beta = 0.165$, $p < .05$). The mediating effect of teacher's emotional support partially strengthens the significant and positive relationship between academic resilience and school engagement. Therefore, **H_4** is **supported**.

Discussion and Conclusion

The first hypothesis shows that academic resilience improves student engagement. High-resilience students are more engaged in school (Theron et al., 2022). These students are happier at school, have better relationships with teachers, and participate more in class (Romano et al., 2021a). Dyrbye et al. (2010) also discovered that resilient students are less sad, have a greater quality of life, report more social support, have a more optimistic perspective of their learning environment, and are less pressured and overworked. Highly resilient students used cognitive and affective coping techniques simultaneously (Lee et al., 2017). High-resilience students regard emotional responses as a strength rather than a drawback in schooling. Academically resilient students use the right tools to enhance their grades and participate in class. Additionally, academic resilience also affects students' perceptions of instructors' emotional support, as shown in the second hypothesis. Previous research supports this conclusion (Hu, 2022; Romano et al., 2021b). Yuan et al. (2018) also found that highly resilient people had a more favourable view of teachers' emotional support. Downey (2008) also advocates considering the instructor-student interaction and classroom atmosphere to foster academic resilience. Resilient adolescents are more likely to participate in school (Tang et al., 2019). The findings support the notion that resilient students are more engaged in school and receive greater emotional support from teachers. The third hypothesis showed that instructors' emotional support greatly affects students' school engagement, which is supported by prior research (Kelly & Zhang, 2016; Pérez-Salas et al., 2021). Teacher emotional support and students' school engagement are also linked (Pöysä et al., 2019). However, most of the studies described earlier were about elementary and secondary school pupils, and none were about higher education. Lastly, the fourth hypothesis supports Romano et al. (2021) by showing that instructors' emotional support somewhat mediates students' academic resilience and school engagement. Previous research, however, has shown that instructor encouragement does not moderate the connection to students' interest (Ansong et al., 2017). This study showed that emotionally resilient academic students benefit from instructors' emotional support, which boosts engagement. Thus, emotionally supportive teachers have more engaged students. According to Pedler et al. (2020), instructors' help affects students' engagement, therefore, they are vital to meaningful involvement. The study found that academically successful students are more likely to have supportive peers and teachers. After examining the relevant literature and past studies, only a few publications, such as Romano et al. (2021b) explored the mediation impact of teacher emotional support between academic resilience and school engagement. Therefore, **H_4** has been accepted.

This study examined City College of Angeles students' academic resilience, perceived emotional support, and school engagement. The study seeks to link academic resilience and school engagement through students' evaluations of teachers' emotional support. Correlation, path analysis, and mediation supported this idea. These findings shed light on what motivates students in HEIs in the Philippines. This study expanded on earlier research to show that individual resources like resilience are as significant as contextual ones, like teacher emotional support, in enhancing student engagement. The following data illuminate the efficacy of various typical higher education strategies, which may be applicable to online class setup. To promote motivation and avoid behavioural issues, children must learn how to recover from setbacks. Resilience-based programmes have been shown to improve students' well-being in several studies (Morote et al., 2022).

This study also found productive classroom interactions, notably teachers' emotional support. Instructors should support students emotionally in a variety of ways. First, teachers must grasp their students' individual conditions and requirements. Thus, instructors should address students' particular needs for classroom success. The Covid-19 pandemic may be worsening some behaviours, especially in online learning environments. Teachers should schedule breaks between synchronous class sessions. Even though these are young adults, higher education instructors might discuss what they have observed with the students' families to help better accommodate them at home. Teachers could also meet with each student online to assess their requirements and advise them on how to succeed in school. For example, labelling a nonverbal signal for students to use during online learning time to notify teachers that they are having problems (e.g., personal chat through various social media platforms) so that teachers can excuse them or help them in the moment (Bhatti & Teevno, 2021); stopping video when students need a break or are overstimulated (Castelli & Sarvary, 2021); and trying to help them relax. Instructors could open a session with a check-in question like How are you feeling today? or What are you thankful for today? These questions encourage students to assess their mood and discuss any academic or personal issues with instructors. Also, teachers could publish daily check-in questions on the school's LMS to give students asynchronous check-in possibilities. No matter how difficult, teachers should prioritise this time with students so they can feel more connected, guided, and included in a comfortable routine. Teachers should make sure these check-ins are informal and focused on students' feelings rather than their learning. Finally, teachers might employ guided meditation in online synchronous sessions, or with their families, to promote mindfulness. Based on these ideas, administrators should train teachers to demonstrate and support students during online sessions. Policymakers and practitioners should also strengthen teachers' competence to prepare them for complicated classroom settings. It's well known that a digital classroom teacher's mood and job happiness can affect students.

The study's shortcomings are important to take into consideration. This study exclusively included City College of Angeles students only. This study cannot be applied to all HEI students in the country or worldwide. Thus, future researchers may want to duplicate this work using data from other public and private institutions to support or repudiate its claims. Additional support for the claims made in this study can be found by comparing these factors across different types of educational environments (e.g., traditional, online, or blended). Future research may also include sociodemographic profiles as moderators or mediators. Teachers'

reports may provide more complex information about their students' emotional support, so future study should use a multi-informant approach.

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